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RICHARD AUCHTERLONIE
NOVAK DRUCE & QUIGG, LLP
1000 LOUISIANA
SUITE 5320
HOUSTON, TX 77002

EXAMINER

PANNALA, SATHYANARAYA R

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/079,090

Applicant(s)

VENKATESH ET AL.

Examiner

Sathyanarayan Pannala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 15-21, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 and 26-30 is/are allowed.
- 6) ☒ Claim(s) 1-5, 15-21, 31 and 32 is/are rejected.
- 7) ☒ Claim(s) 6-9 and 22-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Applicant's Amendment filed on 2/16/2005 has been examined. Claims 1-32 are pending in this Office Action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 5, 17-18 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Frey, Jr. (US Patent 6,714,949) hereinafter Frey.
4. As per independent claim 1, Frey teaches a method to migrate objects from a first file system configuration to a second file system configuration while allowing access to the objects through both (col. 1 line 64 to col. 2, line 8). Frey teaches the claimed

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step of "a network client sending a directory lookup request for the object to the network file server" as the user access to data during migration include directory look-up (col. 8, lines 43-45). Further, Frey teaches the claimed step of "the network file server receiving the directory lookup request, and in response, performing a directory lookup for the object, and returning to the network client a file handle for the object, the file handle including an identifier of a file system cell including the object, and a pointer to the object in the file system cell" as when a look-up of a name is needed in a target directory having a non-Null source field, the look up operation is performed in the source directory and if the name is found at any point, the metadata pointer associated with the name (id) is returned to the lookup caller (col. 8, lines 45-52). Frey teaches the claimed step of "the network client receiving the file handle for the object, sending to the network file server a request for access to the object, the request for access to the object including the file handle for the object" as file handle GFID or directory handle (DFID) is placed in the target field of the source file's metadata or the source DFID's header record and if the source field in the directory header is not null, the read operation starts by going to the source directory (col. 9, lines 1-3 and lines 33-35). Finally, Frey teaches the claimed step of "the network file server receiving the request for access to the object, and in response, the network file server extracting the file system cell identifier and the object pointer from the file handle included in the request for access, using the file system cell identifier to find the file system cell that includes the object, and using the object pointer to find the object in the file system cell" as when

the files to be read does not have the a target file handle the read operation is performed by the source configuration (col. 10, lines 3-6).

5. As per dependent claim 2, Frey teaches the claimed step of "in response to the directory lookup request, the network file server also includes in the file handle an indication that the object is not in online storage, and in response to the request for access to the object, the network file server inspects the file handle included in the request for access, and upon inspecting the file handle and finding the indication that the object is not in online storage, the network file server begins a process of moving the object from offline storage to online storage" as when the header of the directory record into which a name is to linked has a non-Null target field (examiner interpreting it as not in online) the object should be linked into target directory (again examiner interpreting as the object is brought from offline to online) (col. 9, lines 22-25).

6. As per dependent claim 5, Frey teaches the claimed step of "the file system cells are file system cells of a Unix-based file system, and the network file server accesses the Unix-based file system to obtain the pointer to the object in the file system cell, and the pointer to the object in the file system cell is a Unix-based file identifier" as the configuration data may be stored in one or more configuration tables which together serve a similar purpose as UNIX super block structure (Fig. 1, col. 4, lines 62-65).

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7. As per independent claim 17, which claims for a network server. Frey teaches a method to migrate objects from a first file system configuration to a second file system configuration while allowing access to the objects through both (col. 1 line 64 to col. 2, line 8). Frey teaches the claimed "receiving, from a network client, a directory lookup request for an object in the meta file system, and in response, performing a directory lookup for the object, and returning to the network client a file handle for the object, the file handle including an identifier of a file system cell including the object, and a pointer to the object in the file system cell as the user access to data during migration include directory look-up and when a look-up of a name is needed in a target directory having a non-Null source field, the look up operation is performed in the source directory and if the name is found at any point, the metadata pointer associated with the name (id) is returned to the lookup caller (col. 8, lines 43-52). Frey teaches the claimed "receiving, from the network client, a request for access to the object, the request for access to the object including the file handle for the object, and in response to receipt of the request for access to the object, extracting the file system cell identifier and the object pointer from the file handle included in the request for access, using the file system cell identifier to find the file system cell that includes the object, and using the object pointer to find the object in the file system cell as file handle GFID or directory handle (DFID) is placed in the target file of the source file's metadata or the source DFID's header record and if the source field in the directory header is not null, the read operation starts by going to the source directory (col. 9, lines 1-3 and lines 33-35) and when the files to

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be read does not have the a target file handle the read operation is performed by the source configuration (col. 10, lines 3-6).

8. As per dependent claim 18, Frey teaches the claimed “the network file server is also programmed to respond to the directory lookup request by also including in the file handle an indication that the object is not in online storage, and the network file server is also programmed to respond to the request for access to the object by inspecting the file handle included in the request for access, and upon inspecting the file handle and finding the indication that the object is not in online storage, beginning a process of moving the object from offline storage to online storage” as when the header of the directory record into which a name is to linked has a non-Null target field (examiner interpreting it as not in online) the object should be linked into target directory (again examiner interpreting as the object is brought from offline to online) (col. 9, lines 22-25).

9. As per dependent claim 21, Frey teaches the claimed step of “the file system cells are file system cells of a Unix-based file system, and the network file server is programmed for accessing the Unix-based file system to obtain the pointer to the object in the file system cell, and the pointer to the object in the file system cell is a Unix-based file identifier” as the configuration data may be stored in one or more configuration tables, which together serve a similar purpose as UNIX super block structure (Fig. 1, col. 4, lines 62-65).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 3-4, 15-16, 19-20 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frey, Jr. (US Patent 6,714,949) hereinafter Frey, and in view of Patel et al. (US Patent 6,643,654) hereinafter Patel.

12. As per dependent claims 3, 15, Frey does not explicitly teach using NFS protocol. However, Patel teaches the claimed step of "the network client and the network file server use the Network File System (NFS) protocol when communicating

the directory lookup request and the request for access to the object” as the operating system 200 includes the Network File System (NFS) Protocol 220 (Fig. 2, col. 5, lines 39-47). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Patel’s teachings would have allowed Frey’s network server to provide NFS protocol for server and clients communication as the NTFS file system is very popular and well known (col. 1, lines 63-65).

13. As per dependent claims 4, 16, Frey does not explicitly teach using CIFS protocol. However, Patel teaches the claimed step of “the network client and the network file server use the Common Internet File System (CIFS) protocol when communicating the directory lookup request and the request for access to the object” as the client 110 may be general-purpose computer configured to execute applications including CIFS protocol (Fig. 1, col. 4, lines 61-64). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Patel’s teachings would have allowed Frey’s network server to provide CIFS protocol for server and clients communication as the CIFS protocol for Microsoft Window operating system, the utility of the filer will enhance for network clients (col. 2, lines 8-12).

14. As per dependent claims 19, 31, Frey does not explicitly teach using NFS protocol. However, Patel teaches the claimed step of “the network file server is

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programmed for using the Network File System (NFS) protocol when sending the directory lookup request and when receiving the request for access to the object” as the operating system 200 includes the Network File System (NFS) Protocol 220 (Fig. 2, col. 5, lines 39-47). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Patel’s teachings would have allowed Frey’s network server to provide NFS protocol for server and clients communication as the NTFS file system is very popular and well known (col. 1, lines 63-65).

15. As per dependent claims 20, 32, Frey does not explicitly teach using NFS protocol. However, Patel teaches the claimed step of “the network file server is programmed for using the Common Internet File System (CIFS) protocol when sending the directory lookup request and when receiving the request for access to the object” as the client 110 may be general-purpose computer configured to execute applications including CIFS protocol (Fig. 1, col. 4, lines 61-64). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Patel’s teachings would have allowed Frey’s network server to provide NFS protocol for server and clients communication as the NTFS file system is very popular and well known (col. 1, lines 63-65).

Allowable Subject Matter

16. Claims 6-9 and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
17. Claims 10-14 and 26-30 are allowable over the prior art.

Response to Arguments

18. Applicant's arguments filed on 2/16/2005 have been fully considered but they are not persuasive and details as follows:

a) Applicant's argument stated as "In short, Frey fails to disclose that the file handle to or from the network client includes file system ID of a file system cell, and a file type."

In response to the Applicant's argument, Examiner respectfully disagrees with because Frey teaches network access and in fact storage accessed is on the network (col. 3, lines 54-55). Terminology used is different from the normal usage, for example, as per the current invention "file systems in the metafile system is called as file system cells" (see specification page 3, paragraph 0035). From the Fig. 2 and the specification, a person of ordinary skill in the data processing can interpret as external directory are called as file system cells and which are similar to subdirectory in any file system of an operating system. Mere

usage of unusual terminology and claimed as an invention. Let us consider the popular personal computer system windows, the directory or file system listing consists a root directory under say C drive. It contains subdirectories or subfolders and the and when you click any one subdirectory you will be linked to the subdirectory and file system in the subdirectory will be listed. Each subdirectory or subfolder is called by the inventory as a file system cell. The user is not notified or informed how subdirectories are linked from the root directory. It is natural from programming point of view that there is no need of disclosing the unnecessary information to the user. If we go a step upward in displaying a windows directory system (say desktop root directory), the listing consists of A drive, C drive, D drive and etc., will be displayed and can be accessed any of the listed drives.

b) Applicant's argument stated as "As shown in Applicants' FIG. 13, a file handle, 171 to or from a network client includes a file system ID 172 of the files system... file type (online/offline) 179." see Amendment page 2, paragraph 3.

19. In response to the Applicant's argument, Examiner respectfully disagrees because Frey teaches accessing files using network communication. Applicant's main argument is on the file handle in Fig. 13, which is claimed in claim 1 and other independent claims argument oriented towards this claim. Let us discuss the same windows file system. At the desktop root directory, in order to access the A drive, you select or double click the A drive and the file ID which is A drive and a pointer is the location of the module/component/routine in order to execute to check the A drive.

Whenever there is no floppy present in the drive it is considered as offline. The normal message we receive is "please insert the disk into drive A." Whereas in the current invention, begin mounting of object to bring object online 177. Frey teaches all limitations of claim 1, for example, "a network client sending a directory lookup request for the object to the network file server" as the user access to data during migration include directory look-up (col. 8, lines 43-45). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sathyanarayan Pannala
Examiner
Art Unit 2167

srp
May 22, 2005


G. E. ROBINSON
PATENT EXAMINER